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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,338	10/12/2000	Oliver Opitz	FA/201	2659

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EXAMINER	
BOYD, JENNIFER A	
ART UNIT	PAPER NUMBER
1771	12

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

FILE

Office Action Summary	Application No.	Applicant(s)	
	09/600,338	OPITZ, OLIVER	
	Examiner	Art Unit	
	Jennifer A Boyd	1771	

-- The MAILING DATE of this communication app ars on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29 and 31-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29 and 31-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. The Applicant's Amendment C and Accompanying Remarks, filed February 21, 2003, have been entered as Paper No. 11 and have been carefully considered. The Specification has been amended. Claims 1, 4, 7, 8, 16, 22 and 27 have been amended, claim 20 has been cancelled and claims 1 – 29 and 31 – 37 are pending. The Examiner withdraws the objection to the Specification. The Examiner withdraws the 35 U.S.C. 112, 2nd paragraph rejection of claims 4, 7 and 8 as set forth in paragraphs 3 - 5 of Paper No. 8. In view of the Applicant's arguments and amendments, the Examiner withdraws all 35 U.S.C. 102/103(a) rejections and 35 U.S.C. 103(a) rejections as set forth in paragraphs 6 – 13 of Paper No. 8. However, after an updated search, additional prior art was discovered that appears to render the claims unpatentable. The reasons are discussed below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Oath/Declaration

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because: the priority date of the foreign priority document, DE 29819703.0, is incorrect. The declaration states that the filing date is November 4, 1988, however, the correct filing date is November 4, 1998.

Claim Rejections - 35 USC § 103

4. Claims 1 – 4, 6 – 22, 24 - 27, 29, 31 – 34 and 36 - 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton et al. (US 5,244,716) in view of Peter (EP 210,656).

Thornton et al. is directed to stretchable fabric and articles such as stockings, gloves and hats (column 1, lines 5 – 23).

As to claims 1, 3, 10 – 11, 27, 29 and 31 – 34, Thornton teaches a composite material comprising a first film layer resistant to penetration by liquid water and permeable to water vapor, equated to Applicant's "functional layer", adhered at discrete locations, or also known as dot form, to a second layer of water vapor permeable extensible sheet material, equated to Applicant's "textile sheet material" (Abstract). In one embodiment, the two layer composite as described above is secured to an outer layer such as a glove of leather or imitation leather, equated Applicant's "leather layer" (column 7, lines 56 – 60). The use of an adhesive between the polymeric, "functional layer", and outer fabric layer, or "leather layer", is acceptable (column 7, lines 60 – 65). The adhesive can be in powder form (column 14, lines 19 – 25).

As to claims 2 and 26, Thornton implies that the inner surface of the leather layer is the flesh side of the leather. Thornton states that the laminate can be used for a glove (column 7, lines 56 – 60). If used for a glove, the flesh side would be adhered to the "functional layer" and the outer surface would be the visible part of the glove.

As to claims 4, 6 - 7, and 36 – 37, Thornton teaches that the adhesive used can be a crosslinkable polyurethane adhesive in a powder form (column 14, lines 19 – 25).

As to claims 19 and 20, Thornton teaches that the second layer, or "textile sheet material", is preferably a knitted or woven structure (column 5, lines 1 – 5).

As to claim 21, Thornton teaches that the first layer resistant to penetration by liquid water and permeable to water vapor, equated to Applicant's "functional layer", is a film (Abstract).

As to claim 22, Thornton teaches that the first layer resistant to penetration by liquid water and permeable to water vapor, equated to Applicant's "functional layer", can be a polyurethane film (column 21, lines 5 – 10).

As to claims 1, 8 – 9 and 27, Thornton teaches the claimed invention above except fails to disclose that the outer layer, or Applicant's "leather layer" is openly hydrophobicized.

Peter discloses a hydrophobitizing impregnating spray providing for leather containing a fluorocarbon resin (Abstract).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the leather outer layer of Thornton by providing it with a water repellent coating such as the hydrophobitizing spray of Peter with the motivation of having a porous material that will repel water while allowing the material to breathe.

As to claims 1, 12, 15 – 18, 24 – 25 and 27, although Thornton in view of Peter does not explicitly teach the claimed water vapor transmission resistance (Ret) of less than 600×10^{-3} $(m^2mbar)/W$ and a crumple flex durability of at least 50,000 cycles as required by claims 1 and 27, the leather layer has a spray rating greater than 70% as required by claim 12, a water vapor

transmission resistance (Ret) of less than 400×10^{-3} (m^2mbar)/W as required by claim 15, a water vapor transmission resistance (Ret) of less than 300×10^{-3} (m^2mbar)/W as required by claim 16, the leather layer after complete immersion in deionized water for 1 hour increases by less than 50% in weight as required by claim 17 and by less than 10% in weight as required by claim 18 compared with a dry laminate, the laminate is waterproof at a water pressure of greater than 0.13 bar as required by claim 24 and the leather layer has an abrasion resistance of <3 by the Darmstadt method as required by claim 25, it is reasonable to presume a water vapor transmission resistance (Ret) of less than 600×10^{-3} (m^2mbar)/W and a crumple flex durability of at least 50,000 cycles as required by claims 1 and 27, the leather layer has a spray rating greater than 70% as required by claim 12, a water vapor transmission resistance (Ret) of less than 400×10^{-3} (m^2mbar)/W as required by claim 15, a water vapor transmission resistance (Ret) of less than 300×10^{-3} (m^2mbar)/W as required by claim 16, the leather layer after complete immersion in deionized water for 1 hour increases by less than 50% in weight as required by claim 17 and by less than 10% in weight as required by claim 18 compared with a dry laminate, the laminate is waterproof at a water pressure of greater than 0.13 bar as required by claim 24 and the leather layer has an abrasion resistance of <3 by the Darmstadt method as required by claim 25 is inherent to Thornton in view of Peter. Support for said presumption is found in the use of like materials (i.e. composite material comprising a first film layer resistant to penetration by liquid water and permeable to water vapor adhered at discrete locations to a second layer of water vapor permeable extensible sheet material and a leather layer) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties discussed above obviously would have been present

once the Thornton in view of Peter product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

As to claims 13 and 14, Thornton in view of Peter disclose the claimed invention except for that the outer layer, or "leather layer" has a thickness between 0.8 mm and 2 mm as required by claim 13 and a thickness between 1mm and 1.5 mm as required by claim 14. It should be noted that thickness is a result effective variable; for example, as the outer layer, or "leather layer", thickness decreases, the layer becomes more pliable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create an outer layer, or "leather layer" having a thickness between 0.8 mm and 2 mm as required by claim 13 and a thickness between 1mm and 1.5 mm as required by claim 14, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the thickness of the outer layer in order to have a durable yet pliable outer layer.

5. Claims 5, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton et al. (US 5,244,716) in view of Peter (EP 210,656) as applied to claim 1 above, and further in view of McConnell (US 4,299,933).

Thornton in view of Peter teaches the claimed invention above except fails to disclose the use of an adhesive that is a copolyester or a polyamide.

McConnell discloses a composition comprising a linear thermoplastic copolyester and that certain polyesters are known to be useful as adhesives for bonding fabrics and leather.

McConnell further teaches that the polymers may be extrusion coated or applied from solutions to provide coatings for fabrics, metals, plastics, leather and wood (column 2, lines 1 – 8). Further, McConnell teaches that the polyesters can be used to bond fabrics at relatively low temperatures and the bonded fabrics have a good resistance to typical laundering procedures. The polymers may be used in powder form or extruded into film (a continuous form) for use in laminating or bonding substrates (column 3, lines 33 – 42) as required by claims 28 and 35. In Example 3, McConnell teaches the use of powder and dot application of the adhesive (column 5, lines 31 – 41).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the laminate of Thornton in view of Peter by using the copolyester adhesive of McConnell motivated by the expectation of increased resistance to typical laundering procedures.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thornton et al. (US 5,244,716) in view of Peter (EP 210,656) as applied to claim 1 above, and further in view of Gore (US 4,187,390).

Thornton in view of Peter teaches the claimed invention above except fails to disclose that the functional layer is expanded PTFE.

Gore teaches a tetrafluoroethylene polymer in a porous form which can be shaped into a film (Abstract). The polytetrafluoroethylene film can be laminated or bonded with other materials to create composite structures (column 1, lines 35 – 45). The material has high strength and high porosity (Abstract). The expanded, amorphous locked polytetrafluoroethylene can be

bonded to other materials much more readily than conventional polytetrafluoroethylene products (column 5, lines 48 – 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use expanded polytetrafluoroethylene as suggested by Gore as the functional layer of the composite of Thornton in view of Peter motivated by the desire to have a highly porous, strong film which bonds easily to substrates.

Response to Arguments

7. Applicant's arguments with respect to claims 1 – 29 and 31 – 37 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jennifer Boyd
May 12, 2003

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